UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS

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NOTICE OF ALLOWANCE AND FEE(S) DUE

40582 7590 12/30/2008

AIR LIQUIDE Intellectual Property 2700 POST OAK BOULEVARD, SUITE 1800

HOUSTON, TX 77056

EXAMINER BUSHEY, CHARLES S

ART UNIT PAPER NUMBER

1797 DATE MAILED: 12/30/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573.091	II/20/2006	Richard Dubettier-Grenier	SERIE 6374	8940

TITLE OF INVENTION: FLUID DISTRIBUTOR FOR A MATERIAL AND HEAT EXCHANGE COLUMN, IN PARTICULAR, A PACKED COLUMN AND COLUMN PORVIDED WITH SUCH A DISTRIBUTOR

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(8) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	03/30/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 1SI. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and I/2 the ISSUE FFE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

or <u>Fax</u> (571)-273-2885

INSTRUCTIONS: This appropriate. All further condicated unless corrected maintenance fee notification	form should be used for correspondence including d below or directed oth ions.	or tran g the l crwise	smitting the ISSU Patent, advance or in Block 1, by (a						
	NCE ADDRESS (Note: Use Blo		any change of address)	Fee pap	(s) Transmittal. Thi ers. Each additiona	is certil I paper	icate cannot be used f	r domestic mailings of or any other accompanyi nt or formal drawing, m	ing
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HOUSTON, TX	//056							(Depositor's nan	ne)
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APPLICATION NO.	FILING DATE			FIRST NAMED INVENTOR	FIRST NAMED INVENTOR ATTORNEY DOG			CONFIRMATION NO.	П
10/573,091	11/20/2006			Richard Dubettier-Grenier			SERIE 6374	8940	_
TITLE OF INVENTION: AND COLUMN PORVIE				AND HEAT EXCHANGE	COLUMN, IN PA	ARTIC	ULAR, A PACKED O	COLUMN	
APPLN, TYPE	SMALL ENTITY	IS	SUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUI	E FEE	TOTAL FEE(S) DUE	DATE DUE	
nonprovisional	NO		\$1510	\$300	\$0		\$1810	03/30/2009	
EXAMI	NER		ART UNIT	CLASS-SUBCLASS	1				
BUSHEY, CI	HARLES S		1797	261-096000	_				
"Fee Address" indic PTO/SB/47; Rev 03-02 Number is required. 3. ASSIGNEE NAME AN	ondence address (or Cha 7122) attached. cation (or "Fee Address" 2 or more recent) attach ND RESIDENCE DATA sess an assignee is identi in 37 CFR 3.11. Comp	nge of ' Indica ed. Use	Correspondence tion form of a Customer	2. For printing on the p (1) the names of up to or agents OR, alternati (2) the name of a sing registered attorney or 2 registered patent atti- listed, no name will be FIHE PATENT (print or ty data will appear on the p T a substitute for filing an (B) RESIDENCE: (CTT)	o 3 registered paten vely, le firm (having as a agent) and the nam meys or agents. If printed. pc)	memb es of u no nan	er a 2p to p to se is 3	ocument has been filed	for
Please check the appropria		catego		inted on the patent):					ent
Issue Fee	A check is enclosed.	isc iirst reappiy ai	ny pres	lously paid issue fee	snown above)				
					Payment by credit card. Form PTO-2038 is attached.				
Advance Order - # of Copies				☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number(enclose an extra copy of this form).					
	SMALL ENTITY statu	s. See	37 CFR 1.27.	b. Applicant is no lon					
NOTE: The Issue Fee and interest as shown by the re	Publication Fee (if requeecords of the United Sta	iired) v tes Pate	vill not be accepted ent and Trademark	from anyone other than to Office.	the applicant; a regi	stered :	attorney or agent; or th	ne assignee or other party	r in
Authorized Signature					Date				
Typed or printed name					Registration N	lo			
This collection of informa an application. Confidenti submitting the completed this form and/or suggestic Box 1450, Alexandria, Vi Alexandria, Virginia 2231	tion is required by 37 C iality is governed by 35 application form to the ons for reducing this bur rginia 22313-1450. DC 3-1450.	FR 1.3 U.S.C. USPT den, st NOT	11. The informatic 122 and 37 CFR O. Time will vary sould be sent to the SEND FEES OR 6	on is required to obtain or 1.14. This collection is es depending upon the indi- e Chief Information Offic COMPLETED FORMS T	retain a benefit by t timated to take 12 i vidual case. Any co er, U.S. Patent and O THIS ADDRESS	he pub minute mmen Trader S. SEN	ic which is to file (and to complete, includir s on the amount of ti- nark Office, U.S. Dep D TO: Commissioner	I by the USPTO to proce ig gathering, preparing, a me you require to compl artment of Commerce, P for Patents, P.O. Box 14:	ss) ind ete O.

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UNITED STATES PATENT AND TRADEMARK OFFICE

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P O Box 1450 Alexandria, Virgima 22313-1450 www.uspto.gov

DATE MAILED: 12/30/2008

APPLICATION NO	D.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,091	0/573,091 11/20/2006		Richard Dubettier-Grenier	SERIE 6374 8940	
40582	7590	12/30/2008		EXAMINER	
AIR LIQUII	AIR LIQUIDE			BUSHEY, C	CHARLES S
	Intellectual Property			ART UNIT	PAPER NUMBER
2700 POST OAK BOULEVARD, SUITE 1800 HOUSTON, TX 77056			1797	_	

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 345 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 345 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 (571)-272-4200.

Notice of Allowability

Application No.	Applicant(s)			
10/573,091	DUBETTIER-GREN	IIER ET AL.		
Examiner	Art Unit			
Scott Bushev	1797			

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address-All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-86) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.133 and MPEP 1308.

- of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

 1. No This communication is responsive to the preliminary amendment filed March 23, 2006.
- 2. The allowed claim(s) is/are 8-14 (renumbered as 1-7, respectively).
- 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - - 1. Certified copies of the priority documents have been received.
 - Certified copies of the priority documents have been received in Application No.
 - Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
- 5. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No./Mail Date
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- 1. Notice of References Cited (PTO-892)
- 2. Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3. Information Disclosure Statements (PTO/SB/08),
- Paper No./Mail Date 11-20-06
- Examiner's Comment Regarding Requirement for Deposit of Biological Material
- Notice of Informal Patent Application
 ☐ Interview Summary (PTO-413),
- Paper No./Mail Date ____.

 7. ⊠ Examiner's Amendment/Comment
 - . A Examiner's Amendment comment
- 8. \boxtimes Examiner's Statement of Reasons for Allowance

/Scott Bushey/

Primary Examiner, Art Unit 1797

9. ☐ Other

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EXAMINER'S AMENDMENT

 An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In the Specification:

Page 1, after the title and before line 5, the following sentence has been inserted,
--This application is filed under 35 U.S.C. 371 as a national stage filing of
PCT/FR04/50501, which was filed on October 14, 2004, and which claims foreign
priority under 35 U.S.C. 119 to French application 0350708, filed October 20, 2003.--

Page 2, after line 19, the heading, --Brief Description of the Drawings-- has been inserted.

Page 2, after line 25, the heading, --Detailed Description of the Preferred Embodiment-- has been inserted.

REASONS FOR ALLOWANCE

2. The following is an examiner's statement of reasons for allowance: The prior art of record fails to disclose or suggest a fluid distributor for an exchange column including a series of adjacent parallel vertical walls defining alternate gas and liquid spaces, wherein each pair of adjacent vertical walls define a gas space, and a line of openings formed in the upper part of the vertical walls, the openings being provided as first and second openings, the first openings having a first length toward a bottom horizontal wall

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and the second openings having a second longer length extending toward the bottom horizontal wall.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

CONCLUSION

 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Bushey whose telephone number is 571 272-1153. The examiner can normally be reached on M-Th 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Scott Bushey Primary Examiner Art Unit 1797

/S. B./ 12-21-**0**8

/Scott Bushey/ Primary Examiner, Art Unit 1797